UNIVERSITY OF CALCUTTA

Department of Agronomy

FACULTY ACADEMIC PROFILE/ CV

Full name of the faculty member: DR NILANJAN DEB
Designation: ASSOCIATE PROFESSOR
Specialisation : Agronomy, agrobiotechnology, nanotechnology

Contact information : Department of Agronomy,
Institute of Agricultural Science, University of Calcutta
51/2, Hazra Road, Kolkata – 700019

Academic qualifications:

College/ university from which the degree was obtained	Abbreviation of the degree
Visva Bharati University	B.Sc(Ag) Hons
Visva Bharati University	M.Sc(Ag) in Agronomy
Indian Institute of Technology, Kharagpur	M.Tech
Bidhan Chandra Krishi viswavidyalay	Ph D

Positions held/ holding:

- Ex -Head, Deptt. of Agronomy, IAS, C.U.
- Head, Deptt. of Seed Science and Technology, IAS, C.U.

- Head, Deptt. of Horticulture, IAS, C.U.

Research interests:

- Nanotechnology in agriculture
- Plant nutrient management
- Agrobiotechnology
- Nanofabrication of agrochemicals
- Biopolymer
- Biosensor
- Bioelectronics
- Biofuel from agricultural waste
- Synthesis of agrochemicals

Projects:

Completed projects:

Project 1. Evaluation of nano particulated nutrient delivery system and molecular impact assessment sponsored by **Centre for Research in Nanoscience and Nanotechnology**.

Principal Investigator- Dr Nilanjan Deb

Project 2. Department of Biotechnology, Ministry of Science and Technology, Government of India sponsored collaborative Eastern region network project on Algal biofuel on "Collection, characterization and screening of potential micro algae from West Bengal and Orissa coast and pilot scale demonstration of algal oil production. (2009-11)

Principal Investigator (West Bengal): Dr Nilanjan Deb.

Select list of publications:

a) ***Journals:***

Chakraborty, S; Deb, N; Datta, M 2011 Effect of level and splitting of nitrogen and potassium fertilizers on summer rice (*Oryza sativa L*.) Environment & ecology29(2): 647-650

Deb, N 2008 Application of nanotechnology in agriculture: from agronomic management to food technology in National Conference on Application of identified chemical and biological technologies in agriculture at Jadavpur University on 22-23, 2008

Deb, N 2008 Growth, yield and oil content of spring sunflower (Helianthus annuus L.) under calcium, sulphur and boron fertilization Indian Biologist 40(2) :29-33.

Sarkar, R.K., Deb, N., Parya, and M.K.2007 Effect of seed treatment and foliar nutrition on growth and productivity of spring sunflower (*Helianthus annuus* L.) Indian J. Agricultural Sciences 77 (3):101-104,March 2007

Sarkar, R.K; Deb, N, Dasgupta, D.K. and Bera, S.B;2005. Relative efficiency of integrated nutrient management in terms of energy balance in rice-sunflower cropping system under coastal saline ecosystem. *Paper presented in National seminar on Plant Physiology (Crop Productivity and quality improvement through physiological interventions) in Nov 23-25, 2005*

Sarkar, R.K., Deb, N., Dasgupta, D.K., Mallick, R.B. and Bera, S.B. 2005. Role of Integrated Nutrient Mgt. for evolving sustainable rice based cropping system for coastal saline ecosystem. *paper presented in National seminar on Plant Physiology (Crop Productivity and quality improvement through physiological Interventions) in Nov 23- 25, 2005*

Deb, N, 2002 .Fertilization of summer crops and mulching and seed treatment in wheat under rainfed rice-based sequence. Unpublished Ph.D thesis. pp 1-269.

Deb, N., Alam, B., Duttagupta, S and Ghosh.1996.Cell membrane stability of leaf tissues and its relationship with drought tolerance in *Arachis. Indian Journal of Exp. Biol*.34:1044- 1047

Das. N.R. and Deb.N.1995.Evaluation of productivity of some rainfed summer crops under different levels of NPK fertilizers. *Adv. Agric. Res. Indian.1995, vol3, p.141- 150*

Das, N.R. and Deb, N.1995. Rainfed jute seed germination and yields under mulch and seed treatment applied to preceding wheat. *Adv Agric Res. Indian.Vol.3.p.76-86*

Deb. N. 1992. Cell membrane stability as a measure for screening drought tolerance in Groundnut (*Arachis hypogea*). *M.Tech thesis submitted to Indian Institute of Technology, Kharagpur* .p1-135.

c) Conference/ seminar volumes :

Deb, N. 2009 Development and commercialization of boron nanoconstituents – its application in agriculture, medicine and industry in *the CII:CU seminar Nanotechnology: University Industry Interface Creating Capabilities for Tomorrow* The Technology Campus, Calcutta University, Salt Lake, Kolkata on 10 June 2009

Deb, N 2009. A passage of chemistry to biology through 21st century" in the J.C. Bose Life and work national seminar at Jadavpur University on March 20, 2009

Deb, N 2008 Nanofabricated tools in agriculture. *in* a compendium on Centre for Research in Nanoscience and Nanotechnology, submitted by University of Calcutta to Ministry of Human resource and Dev and UGC:111-114

Deb, N 2008 Application of nanotechnology in agriculture: from agronomic management to food technology in National Conference on Application of identified chemical and biological technologies in agriculture at Jadavpur University on 22-23, 2008

Membership of Learned Societies:

1. Life Member of Indian Society of Agronomy

Patents :

INTERNATIONAL AND NATIONAL PATENTS of Dr NILANJAN DEB (till Jan , 2016):

Sl. No.	Patent Number	Dated	Inventor	Applicant
1.	WO 2013121244 A1	22.08.2013	Dr Nilanjan Deb	Calcutta University
2.	US 20130219979 A1	29.08.2013	Dr Nilanjan Deb	Calcutta University
3.	PCT/IB2013/052975	15.04.2013	Dr Nilnajn Deb	Calcutta University
4.	IPO 0154/KOL/2012	15.02.2012	Dr Nilanjan Deb	Calcutta University
5.	IPO 0227/KOL/2013	27.02.2013	Dr Nilanjan Deb	Calcutta University
6.	IPO 296/KOL/2013	14.03.2013	Dr Nilanjan Deb	Calcutta University
7.	IPO 962/KOL/2013	20.8.2013	Dr. Nilanjan Deb	Calcutta University
8.	PCT/IB2013/ 054119	20.05.2013	Dr. Nilanjan Deb	Calcutta University
9.	IPO/734/KOL/2013	20.06.2013	Dr. Nilanjan Deb	Calcutta University
10.	IPO/1311/KOL/2013	19.11.2013	Dr. Nilanjan Deb	Calcutta University
11.	US-14/309,554	19.06.2014	Dr. Nilanjan Deb	Calcutta University
12	AU-2012369910	04/09/2014	Dr. Nilanjan Deb	Calcutta University
13.	CN-201410410702.7	15.08.14	Dr. Nilanjan Deb	Calcutta University
14.	US-14/464,420	26.08.14	Dr. Nilanjan Deb	Calcutta University

15.	**IN-850302-03-CN-REG(tba) 20.8.14**	**Dr. Nilanjan Deb**	**Calcutta University**
16.	**US 20140377662 25.12.2014**	**Dr. Nilanjan Deb**	**Calcutta University**
17.	**US 20150052739 dt 26.2.15**	**Dr. Nilanjan Deb**	**Calcutta University**
18.	**CN 104419834 A dt 18.3.15**	**Dr. Nilanjan Deb**	**Calcutta University**
19.	**US 20150140305A1 dt 21.5.15**	**Dr. Nilanjan Deb**	**Calcutta University**
20.	**US 20150375302A1 dt 31.12.15**	**Dr. Nilanjan Deb**	**Calcutta University**
21.	**CN 105228955A dt 6.1.16**	**Dr. Nilanjan Deb**	**Calcutta University**
22.	**AU2012369910 dt 7.1. 16**	**Dr. Nilanjan Deb**	**Calcutta University**

International patent links of Dr Nilanjan Deb (Inventor):

http://patents.justia.com/inventor/nilanjan-deb

http://www.freepatentsonline.com/y2014/0377662.html

http://appft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PG01&p=1&u=%2Fnetahtml%2FPTO%2Fsrchnum.html&r=1&f=G&l=50&s1=%2220130219979%22.PGNR.&OS=DN/20130219979&RS=DN/20130219979

http://worldwide.espacenet.com/publicationDetails/biblio?FT=D&CC=CN&NR=104114028A

http://patentscope.wipo.int/search/en/detail.jsf?docId=WO2014140700&recNum=1&maxRec&office&prevFilter&sortOption&queryString&tab=PCT+Biblio

https://www.google.com/patents/US20130219979?dq=USPTO+13%2F825%2C661&hl=en&sa=X&ei=URJFUo7nKMrtrQfd0IHgBg&ved=0CDkQ6AEwAA

http://patentscope.wipo.int/search/en/detail.jsf?docId=WO2013121244&recNum=1&maxRec=1&office&prevFilter&sortOption&queryString=ALLNUM%3A%28PCT%2FIB2012%2F001511+++%29&tab=PC

http://patentscope.wipo.int/search/en/detail.jsf?docId=WO2014132106

http://worldwide.espacenet.com/publicationDetails/originalDocument?FT=D&date=20140904&DB&&CC=AU&NR=2012369910A1&KC=A1&ND=1&locale=en_EP

http://worldwide.espacenet.com/publicationDetails/biblio?bcId=0&return=true&FT=D&CC=CN&NR=104114028A

http://www.ipaustralia.com.au/applicant/university-of-calcutta/patents/AU2012369910/

http://www.wipo.int/patentscope/search/en/detail.jsf?docId=WO2014140700

Invited lectures delivered :

a) Dr N .Deb delivered a invited lecture on **"Application of nanotechnology in Agriculture: from agronomic management to food technology"** in the **National conference on application of identified chemical and biological technologies in Agriculture-'08** in Aug 22-23, 2008 organized by Department of Chemistry , Jadavpur University

b) Dr N. Deb was an invited speaker and delivered a speech on **"A passage of chemistry to biology through 21st century"** in the **J.C. Bose Life and work national seminar** organized by Jadavpur University on March 20, 2009

c) Dr N.Deb was an invited speaker in the CII:CU seminar **Nanotechnology: University Industry Interface *Creating Capabilities for Tomorrow*** The Technology Campus, Calcutta University, Salt Lake, Kolkata on 10 June 2009

Awards:

International fellowship/ awards received by Nilanjan Deb

1. I have been awarded a prestigious **International (European Union) fellowship "Erasmus Mundas mobility for life** "at the Department of Electronic systems of Aalborg University, Denmark to work on bioelectronics.

2. In 2014, I have received distinguished inventor award from Edward Jung (Co founder of Intellectual Ventures Invention Network, USA) in the Food and Health Summit **in Beijing**, **China** in the field of agriculture(25th May, 2014)

Other notable activities:

Calcutta University has already earned US $ 1, 40000 approx.(One lakh forty thousand US dollars) from my inventions sold to Intellectual Ventures, USA and the University has got 30% share of the foreign exchange earnings from my inventions and patents.

Further, Calcutta University will get royalty of my patents, when they will be licensed and will come in the Indian and International market.